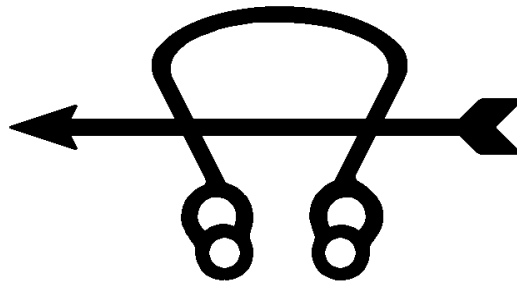


CHAPTER 74



SONAR TECHNICIAN (SUBMARINE) (STS)

NAVPERS 18068-74F

CH-70

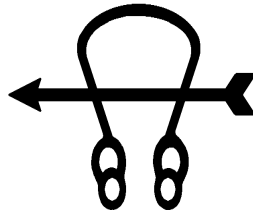
Updated: April 2017

TABLE OF CONTENTS

SONAR TECHNICIAN (SUBMARINE) (STS)

SCOPE OF RATING	STS-3
GENERAL INFORMATION	STS-4
BASIC SONAR OPERATOR	STS-5
ACOUSTIC INTELLIGENCE	STS-5
ADMINISTRATION	STS-5
OCEANOGRAPHY	STS-5
SONAR EMPLOYMENT	STS-6
SONAR EQUIPMENT OPERATIONS	STS-6
SONAR FUNDAMENTALS	STS-6
WEAPONS HANDLING	STS-6
ADVANCED SONAR OPERATOR	STS-7
ACOUSTIC INTELLIGENCE	STS-7
ADMINISTRATION	STS-7
MAINTENANCE	STS-7
OCEANOGRAPHY	STS-8
SONAR EMPLOYMENT	STS-8
SONAR EQUIPMENT OPERATIONS	STS-8
SONAR FUNDAMENTALS	STS-8
WEAPONS HANDLING	STS-9
SONAR SUPERVISOR	STS-10
ACOUSTIC INTELLIGENCE	STS-10
ADMINISTRATION	STS-10
MAINTENANCE	STS-10
OCEANOGRAPHY	STS-11
SONAR EMPLOYMENT	STS-11
SONAR EQUIPMENT OPERATIONS	STS-11
SONAR FUNDAMENTALS	STS-12
WEAPONS HANDLING	STS-12

NAVY ENLISTED OCCUPATIONAL STANDARDS
FOR
SONAR TECHNICIAN (SUBMARINE) (STS)



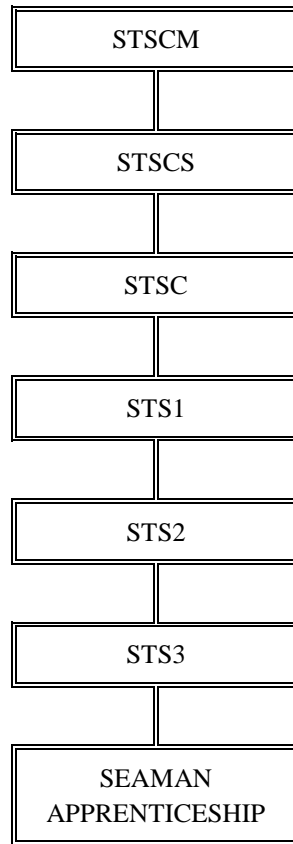
SCOPE OF RATING

Sonar Technicians, Submarine (STS) operate submarine sonar mainframe and auxiliary equipment to include controlling, evaluating and intercepting sonar data from oceanographic equipment; coordinate submarine sonar and underwater fire control interface; and perform organizational and intermediate maintenance.

These Occupational Standards are to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 74.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN article 1306-618.

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

Job Title**Basic Sonar Operator****Job Code****001755****Job Family**

Military Specific

NOC

TBD

Short Title (30 Characters)

BASIC SONAR OPERATOR

Short Title (14 Characters)

BAS SONAR OPER

Pay Plan

Enlisted

Career Field

STS

Other Relationships and Rules

NECs as assigned

Job Description

Basic Sonar Operators detect, track, and classify surface and sub-surface contacts; conduct minor maintenance on and operate mainframe sonar systems, depth sounding equipment, and other auxiliary equipment; and perform towed array handling and expendable bathythermograph evolutions.

DoD Relationship**Group Title**

Sonar, General

DoD Code

113000

O*NET Relationship**Occupation Title**

Radar and Sonar Technicians

SOC Code

55-3017.00

Job Family

Military Specific

Skills*Complex Problem Solving**Operation and Control**Critical Thinking**Mathematics**Operation Monitoring**Equipment Selection**Systems Evaluation**Equipment Maintenance**Management of Material Resources**Active Learning***Abilities***Information Ordering**Deductive Reasoning**Flexibility of Closure**Problem Sensitivity**Auditory Attention**Inductive Reasoning**Written Comprehension**Mathematical Reasoning**Speed of Closure**Static Strength***ACOUSTIC INTELLIGENCE****Paygrade**

E4

Task Type

CORE

Task Statements

Analyze Acoustic Intelligence (ACINT) references and documentation

E5

CORE

Analyze contact data to determine tactical intelligence

E4

CORE

Calculate acoustic source relationships

E4

CORE

Calculate prime mover characteristics and component relationships

ADMINISTRATION**Paygrade**

E4

Task Type

CORE

Task Statements

Prepare Acoustic Intelligence (ACINT) recording packages

MAINTENANCE**Paygrade**

E4

Task Type

CORE

Task Statements

Align sonar equipment for system maintenance

E4

CORE

Conduct preventive maintenance on sonar equipment

E4

CORE

Conduct sound isolation surveys

E4

CORE

Correct sound isolation deficiencies

E4

CORE

Isolate electrical and hydraulic sonar equipment

OCEANOGRAPHY**Paygrade**

E5

Task Type

CORE

Task Statements

Analyze real-time oceanographic data

SONAR EMPLOYMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze plots (e.g. contact evaluation plot (CEP), time-frequency plot, etc.)
E5	CORE	Analyze tactical security conditions on sonar operations
E4	CORE	Classify sonar contacts (e.g. spherical, towed, etc.)
E4	CORE	Perform post watch reconstruction for data collection and analysis
E4	CORE	Provide contact management recommendations

SONAR EQUIPMENT OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze contact data using sonar equipment
E4	CORE	Analyze contact transient emissions
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Track contact data using sonar equipment

SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze own ship noise offenders
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate shaft Revolutions Per Minute (RPMs) by aural or system employment
E4	CORE	Detect contacts using passive sensors
E4	CORE	Maintain acoustic data logs

WEAPONS HANDLING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Conduct weapon shipping and handling evolutions
E4	NON-CORE	Prepare weapons shipping equipment for use
E4	NON-CORE	Transfer ammunition and countermeasure

Job Title**Advanced Sonar Operator****Job Code****001760****Job Family**

Military Specific

NOC

TBD

Short Title (30 Characters)

SONAR OPERATOR

Short Title (14 Characters)

ADV SONAR OPER

Pay Plan

Enlisted

Career Field

STS

Other Relationships and Rules

NECs as assigned

Job Description

Advanced Sonar Operators maintain, troubleshoot, and repair sonar systems and support equipment; operate mainframe sonar systems and auxiliary equipment to detect, track, and classify acoustic contacts; and perform towed array handling, tactical oceanography employment, and expendable bathythermograph evolutions

DoD Relationship**Group Title**

Sonar, General

DoD Code

113000

O*NET Relationship**Occupation Title**

Radar and Sonar Technicians

SOC Code

55-3017.00

Job Family

Military Specific

Skills*Complex Problem Solving**Critical Thinking**Operation and Control**Operation Monitoring**Coordination**Mathematics**Systems Evaluation**Reading Comprehension**Active Learning**Equipment Selection***Abilities***Information Ordering**Deductive Reasoning**Flexibility of Closure**Inductive Reasoning**Problem Sensitivity**Speed of Closure**Auditory Attention**Mathematical Reasoning**Written Comprehension**Perceptual Speed***ACOUSTIC INTELLIGENCE****Paygrade****Task Type****Task Statements**

E4

CORE

Analyze Acoustic Intelligence (ACINT) references and documentation

E5

CORE

Analyze contact data to determine tactical intelligence

E4

CORE

Calculate acoustic source relationships

E4

CORE

Calculate prime mover characteristics and component relationships

ADMINISTRATION**Paygrade****Task Type****Task Statements**

E5

CORE

Manage Acoustic Signature Maintenance Log (ASML) entries

E4

CORE

Prepare Acoustic Intelligence (ACINT) recording packages

E4

CORE

Record towed array handling data

MAINTENANCE**Paygrade****Task Type****Task Statements**

E4

CORE

Align sonar equipment for system maintenance

E4

CORE

Conduct preventive maintenance on sonar equipment

E4

CORE

Conduct sound isolation surveys

E6

CORE

Coordinate equipment modifications

E4

CORE

Correct sound isolation deficiencies

E4

CORE

Isolate electrical and hydraulic sonar equipment

MAINTENANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Prepare sonar dome for entry
E4	CORE	Troubleshoot auxiliary sonar equipment

OCEANOGRAPHY

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Analyze data from tactical decision aids
E4	CORE	Analyze effects of environment on sonar operations
E5	CORE	Analyze real-time oceanographic data
E5	CORE	Develop recommendations based on real-time oceanographic data
E5	CORE	Develop sonar search plans

SONAR EMPLOYMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze plots (e.g. contact evaluation plot (CEP), time-frequency plot, etc.)
E5	CORE	Analyze tactical security conditions on sonar operations
E4	CORE	Classify sonar contacts (e.g. spherical, towed, etc.)
E4	CORE	Perform post watch reconstruction for data collection and analysis
E4	CORE	Provide contact management recommendations
E5	CORE	Verify conditions for towed array employment

SONAR EQUIPMENT OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze contact data using sonar equipment
E4	CORE	Analyze contact transient emissions
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Track contact data using sonar equipment
E5	CORE	Verify sonar system status

SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze own ship noise offenders
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate base frequencies

SONAR FUNDAMENTALS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Calculate shaft Revolutions Per Minute (RPMs) by aural or system employment
E5	CORE	Coordinate sound silencing procedures (e.g. housekeeping surveys, Level of Sound (LOS) cuts, etc.)
E4	CORE	Detect contacts using passive sensors
E4	CORE	Detect contacts utilizing own ship's active sonar
E4	CORE	Maintain acoustic data logs

WEAPONS HANDLING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Conduct weapon shipping and handling evolutions
E4	NON-CORE	Prepare weapons shipping equipment for use
E4	NON-CORE	Transfer ammunition and countermeasure

Job Title**Sonar Supervisor****Job Code****001765****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

SONAR SUPERVISOR

Short Title (14 Characters)

SONAR SUPV

Pay Plan

Enlisted

Career Field

STS

Other Relationships and Rules

NECs as assigned

Job Description

Sonar Supervisors manage the employment of undersea warfare equipment; evaluate, disseminate, and make tactical undersea warfare decisions; coordinate communications; oversee divisional and departmental operations, maintenance, training, tactical oceanography employment, and decision making; and conduct critical work functions to support producing intelligence, processing and attacking targets, repairing and maintaining equipment, and providing personnel support.

DoD Relationship**Group Title**

Sonar, General

DoD Code

113000

O*NET Relationship**Occupation Title**First-Line Supervisors of
Mechanics, Installers, and Repairers**SOC Code**

49-1011.00

Job FamilyInstallation, Maintenance,
and Repair**Skills***Critical Thinking**Complex Problem Solving**Coordination**Operation and Control**Operation Monitoring**Mathematics**Reading Comprehension**Management of Material Resources**Speaking**Systems Evaluation***Abilities***Information Ordering**Problem Sensitivity**Deductive Reasoning**Flexibility of Closure**Inductive Reasoning**Speed of Closure**Auditory Attention**Mathematical Reasoning**Written Comprehension**Perceptual Speed***ACOUSTIC INTELLIGENCE****Paygrade**

E4

Task Type

CORE

Task Statements

Analyze Acoustic Intelligence (ACINT) references and documentation

E5

CORE

Analyze contact data to determine tactical intelligence

E4

CORE

Calculate acoustic source relationships

E4

CORE

Calculate prime mover characteristics and component relationships

E5

CORE

Validate contact classification

ADMINISTRATION**Paygrade**

E5

Task Type

CORE

Task Statements

Manage Acoustic Signature Maintenance Log (ASML) entries

E7

CORE

Manage sonar division administrative requirements (e.g. tactical decision aids, search plans, etc.)

E4

CORE

Prepare Acoustic Intelligence (ACINT) recording packages

E7

NON-CORE

Prepare sonar dome for ships evolutions

E4

CORE

Record towed array handling data

MAINTENANCE**Paygrade**

E4

Task Type

CORE

Task Statements

Align sonar equipment for system maintenance

E5

CORE

Conduct corrective maintenance on sonar equipment

MAINTENANCE (CONT'D)

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct preventive maintenance on sonar equipment
E4	CORE	Conduct sound isolation surveys
E6	CORE	Coordinate equipment modifications
E7	CORE	Coordinate external agency support for major sonar equipment
E4	CORE	Correct sound isolation deficiencies
E4	CORE	Isolate electrical and hydraulic sonar equipment
E5	CORE	Prepare sonar dome for entry
E7	CORE	Supervise sonar corrective maintenance
E6	CORE	Supervise sonar preventive maintenance
E4	CORE	Troubleshoot auxiliary sonar equipment

OCEANOGRAPHY

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Analyze data from tactical decision aids
E4	CORE	Analyze effects of environment on sonar operations
E5	CORE	Analyze real-time oceanographic data
E5	CORE	Develop recommendations based on real-time oceanographic data
E5	CORE	Develop sonar search plans

SONAR EMPLOYMENT

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze plots (e.g. contact evaluation plot (CEP), time-frequency plot, etc.)
E5	CORE	Analyze tactical security conditions on sonar operations
E4	CORE	Classify sonar contacts (e.g. spherical, towed, etc.)
E5	CORE	Conduct acoustic briefings (i.e. environmental conditions, expected frequencies, ship equipment characteristics, etc.)
E4	CORE	Perform post watch reconstruction for data collection and analysis
E4	CORE	Provide contact management recommendations
E5	CORE	Supervise sonar system employment
E5	CORE	Verify conditions for towed array employment

SONAR EQUIPMENT OPERATIONS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze contact data using sonar equipment
E4	CORE	Analyze contact transient emissions
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure workstation for system employment

SONAR EQUIPMENT OPERATIONS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Correlate contacts using multiple sensors (spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E5	CORE	Supervise towed array handling operations
E4	CORE	Track contact data using sonar equipment
E5	CORE	Verify sonar system status

SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze own ship noise offenders
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate base frequencies
E4	CORE	Calculate shaft Revolutions Per Minute (RPMs) by aural or system employment
E5	CORE	Coordinate sound silencing procedures (e.g. housekeeping surveys, Level of Sound (LOS) cuts, etc.)
E4	CORE	Detect contacts using passive sensors
E4	CORE	Detect contacts utilizing own ship's active sonar
E4	CORE	Maintain acoustic data logs

WEAPONS HANDLING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Conduct weapon shipping and handling evolutions
E4	NON-CORE	Prepare weapons shipping equipment for use
E6	NON-CORE	Supervise ammunition and countermeasure transfers
E6	NON-CORE	Supervise weapon shipping and handling evolutions
E6	NON-CORE	Supervise weapons shipping equipment setup and break down
E4	NON-CORE	Transfer ammunition and countermeasure